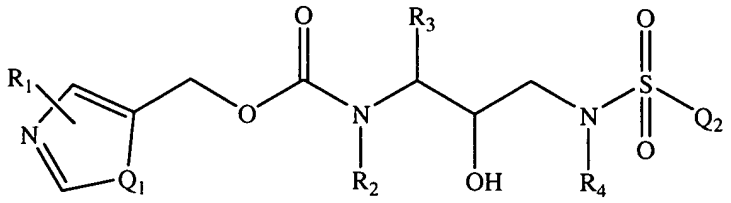
CLAIMS

1. The use of sulfonamide derivatives having the general formula



or a *N*-oxide, salt, stereoisomeric form, racemic mixture, prodrug or esters thereof,

wherein

Q_1 is –S- or –O-;

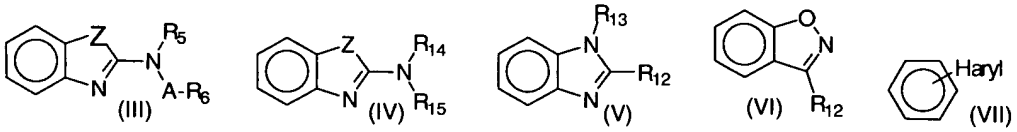
R_1 is hydrogen, C_{1-6}alkyl, hydroxy, amino, halogen, aminoC_{1-4}alkyl and mono-or di(C_{1-4}alkyl)amino;

R_2, R_{14} and R_{15} are, each independently, hydrogen or C_{1-6}alkyl;

R_3 is C_{1-6}alkyl, aryl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, or arylC_{1-4}alkyl;

R_4 is hydrogen, C_{1-4}alkyloxycarbonyl, carboxyl, optionally mono- or disubstituted aminocarbonyl, mono- or di(C_{1-4}alkyl)aminocarbonyl, C_{3-7}cycloalkyl, C_{2-6}alkenyl, C_{2-6}alkynyl or C_{1-6}alkyl optionally substituted with one or more substituents each independently selected from aryl, Het^1, Het^2, C_{3-7}cycloalkyl, C_{1-4}alkyloxy-carbonyl, carboxyl, aminocarbonyl, mono- or di(C_{1-4}alkyl)aminocarbonyl, aminosulfonyl, C_{1-4}alkylS(=O)$_t$, hydroxy, cyano, halogen or amino optionally mono- or di-substituted where the substituents are each independently selected from C_{1-4}alkyl, aryl, arylC_{1-4}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-4}alkyl, Het^1, Het^2, Het^1C_{1-4}alkyl and Het^2C_{1-4}alkyl;

Q_2 is a radical of formula (III), (IV), (V), (VI), or (VII)



and is be attached to the remainder of the molecule via any available carbon atom of the phenyl or fused phenyl ring,

Z is O or S;

A is C_{1-6}alkanediyl, -C(=O)-, -C(=S)-, -S(=O)$_2$-, C_{1-6}alkanediyl-C(=O)-, C_{1-6}alkanediyl-C(=S)- or C_{1-6}alkanediyl-S(=O)$_2$-; wherein the point of attachment to the nitrogen atom is the C_{1-6}alkanediyl group in those moieties containing said group;

R_5 is hydrogen, hydroxy, C_{1-6}alkyl, Het^1C_{1-6}alkyl, Het^2C_{1-6}alkyl, or aminoC_{1-6}alkyl wherein the amino group may optionally be mono- or di-substituted with C_{1-4}alkyl;

R_6 is C_{1-6}alkyloxy, Het^1, Het^1oxy, Het^2, Het^2oxy, aryl, aryloxy or amino; and in case -A- is other than C_{1-6}alkanediyl then R_6 may also be C_{1-6}alkyl, Het^1C_{1-4}-alkyl, Het^1oxyC_{1-4}alkyl, Het^2C_{1-4}alkyl, Het^2oxyC_{1-4}alkyl, arylC_{1-4}alkyl, aryloxyC_{1-4}alkyl or aminoC_{1-4}alkyl; wherein each of the amino groups in the definition of R_6 may optionally be substituted with one or more substituents selected from C_{1-4}alkyl, C_{1-4}alkylcarbonyl, C_{1-4}alkyloxycarbonyl, aryl, arylcarbonyl, aryloxycarbonyl, Het^1, Het^2, arylC_{1-4}alkyl, Het^1C_{1-4}alkyl or Het^2C_{1-4}alkyl;; and

R_5 and $-A-R_6$ taken together with the nitrogen atom to which they are attached may also form Het^1 or Het^2;

R_{12} is hydrogen, $-NH_2$, $-N(R_5)(AR_6)$, $-C_{1-6}$alkyl or C_{1-6}alkyl-W-R_{17}, wherein each C_{1-6}alkyl may optionally be substituted with halogen, hydroxy, aryl, Het^1, Het^2, amino or mono- or di-(C_{1-4} alkyl)amino;

W is oxy, carbonyl, oxycarbonyl, carbonyloxy, oxycarbonyloxy, amino, aminocarbonyl, carbonylamino or sulphur;

R_{13} is hydrogen or C_{1-6}-alkyl optionally substituted with a substituent selected from the group consisting of aryl, Het^1, Het^2, hydroxy, halogen or amino, wherein the amino group may be optionally be mono- or di-substituted with C_{1-4}alkyl;

R_{17} is C_{1-6}alkyl, aryl, Het^1 or Het^2;

Haryl is an aromatic monocyclic, bicyclic or tricyclic heterocycle having 3 to 14 ring members which contains one or more heteroatom ring members selected from nitrogen, oxygen and sulfur and which may optionally be substituted on (i) one or more carbon atoms by a substituent selected from the group consisting of C_{1-6}alkyl, halogen, hydroxy, optionally mono- or di-substituted amino, nitro, cyano, haloC_{1-6}alkyl, carboxyl, C_{3-7}cycloalkyl, optionally mono- or disubstituted aminocarbonyl, methylthio, methylsulfonyl, aryl, $-(R_{7a})_n$-M-R_{7b}, Het^1 and Het^2; wherein the optional substituents on any amino function in the above group of substituents are independently selected from R_5 and $-A-R_6$; and on (ii) a nitrogen atom if present by hydroxy or $-A-R_6$;

R_{7a} is C_{1-6}alkanediyl optionally substituted with one or more substituents selected from, halogen, C_{1-4}alkylcarbonyl, C_{1-4}alkyloxycarbonyl, aryl, arylcarbonyl, aryloxycarbonyl, Het^1 or Het^2;

R_{7b} is C_{1-6}alkyl optionally substituted with one or more substituents selected from halogen, C_{1-4}alkylcarbonyl, C_{1-4}alkyloxycarbonyl, aryl, arylcarbonyl, aryloxycarbonyl, Het^1 or Het^2;

R_8 is hydrogen, C_{1-6}alkyl, C_{2-6}alkenyl, arylC_{1-6}alkyl, C_{3-7}cycloalkyl, C_{3-7}cycloalkylC_{1-6}alkyl, aryl, Het^1, Het^1C_{1-6}alkyl, Het^2 or Het^2C_{1-6}alkyl;

M is defined by -C(=O)-, -O-C(=O)-, -C(=O)-O-, $-CH_2$-CHOH-, -CHOH-CH_2-,

$-NR_8-C(=O)-$, $-(C=O)-NR_8-$, $-S(=O)_2-$, $-O-$, $-S-$, $-O-S(=O)_2-$, $-S(=O)_2-O-$, $-NR_8-S(=O)_2$ or $-S(=O)_2-NR_8-$;

n is zero or 1;

for the manufacture of a medicament useful for inhibiting HCV activity in a mammal infected with HCV.

2. The use as claimed in claim 1 wherein Q_2 is a radical of formula (III).

3. The use as claimed in claim 1 wherein Q_2 is a radical of formula (IV).

4. The use as claimed in claim 1 wherein Q_2 is a radical of formula (V).

5. The use as claimed in claim 1 wherein Q_2 is a radical of formula (VI).

6. The use as claimed in claim 1 wherein Q_2 is a radical of formula (VII).

7. The use as claimed in claim 2 wherein A is -C(=O)- or C_{1-6}alkanediyl, R_5 is hydrogen or C_{1-6}alkyl; or taken together with $-A-R_6$ and with the nitrogen atom to which it is attached forms a Het^1; R_6 is C_{1-6}alkyloxy, Het^1, Het^2, aryl or amino; and in case -A- is other than C_{1-6}alkanediyl then R_6 may also be C_{1-6}alkyl, Het^1C_{1-4}-alkyl, Het^2C_{1-4}alkyl, arylC_{1-4}alkyl or aminoC_{1-4}alkyl; wherein each of the amino groups in the definition of R_6 may optionally be substituted with one or more substituents selected from C_{1-4}alkyl, arylC_{1-4}alkyl, Het^1C_{1-4}alkyl or Het^2C_{1-4}alkyl.

8. The use as claimed in claim 3 wherein R^{14} and R^{15} are both hydrogen or are both methyl.

9. The use as claimed in claim 4 wherein R_{12} is hydrogen and R_{13} is hydrogen or C_{1-6}-alkyl optionally substituted with aryl.

10. The use as claimed in claim 6 wherein Haryl is thiazolyl or oxazolyl which may both optionally be substituted with C_{1-6}alkyl or Het^2amino.

11. The use as claimed in any one of claims 1 to 10 wherein R_2 is hydrogen, R_3 is arylC_{1-4}alkyl and R_4 is C_{1-6}alkyl.

12. The use as claimed in claim 1 wherein the compound is {3-[(2-Acetylamino-benzooxazole-6-sulfonyl)-isobutyl-amino]-1-benzyl-2-hydroxy-propyl}-carbamic acid thiazol-5-ylmethyl ester;

(6-{[2-Hydroxy-4-phenyl-3-(thiazol-5-ylmethoxycarbonylamino)-butyl]-isobutyl-sulfamoyl}-benzooxazol-2-yl)-carbamic acid ethyl ester;

[1-Benzyl-2-hydroxy-3-({2-[(6-hydroxy-pyridine-3-carbonyl)-amino]-benzooxazole-6-sulfonyl}-isobutyl-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[(pyridine-3-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

{1-Benzyl-2-hydroxy-3-[isobutyl-(2-pyrrolidin-1-yl-benzooxazole-6-sulfonyl)-amino]-propyl}-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[methyl-(2-pyrrolidin-1-yl-ethyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[2-(4-methyl-piperazin-1-yl)-acetylamino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[methyl-(5-oxo-pyrrolidine-2-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[methyl-(pyridine-4-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-3-({2-[(furan-3-carbonyl)-methyl-amino]-benzooxazole-6-sulfonyl}-isobutyl-amino)-2-hydroxy-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[(1-methyl-pyrrolidine-2-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

{1-Benzyl-3-[(3-benzyl-3H-benzoimidazole-5-sulfonyl)-isobutyl-amino]-2-hydroxy-propyl}-carbamic acid thiazol-5-ylmethyl ester;

{3-[(2-Amino-benzothiazole-6-sulfonyl)-isobutyl-amino]-1-benzyl-2-hydroxy-propyl}-carbamic acid thiazol-5-ylmethyl ester;

(1-Benzyl-3-{[2-(2-dimethylamino-ethylamino)-benzothiazole-6-sulfonyl]-isobutyl-amino}-2-hydroxy-propyl)-carbamic acid thiazol-5-ylmethyl ester;

(1-Benzyl-2-hydroxy-3-{isobutyl-[2-(2-pyrrolidin-1-yl-ethylamino)-benzothiazole-6-sulfonyl]-amino}-propyl)-carbamic acid thiazol-5-ylmethyl ester;

(1-Benzyl-2-hydroxy-3-{isobutyl-[2-(2-pyrrolidin-1-yl-ethylamino)-benzothiazole-6-sulfonyl]-amino}-propyl)-carbamic acid thiazol-5-ylmethyl ester trifluoroacetate salt;

(1-Benzyl-3-{[2-(3-dimethylamino-propylamino)-benzothiazole-6-sulfonyl]-isobutyl-amino}-2-hydroxy-propyl)-carbamic acid thiazol-5-ylmethyl ester;

(1-Benzyl-2-hydroxy-3-{isobutyl-[2-(2-piperazin-1-yl-ethylamino)-benzothiazole-6-sulfonyl]-amino}-propyl)-carbamic acid thiazol-5-ylmethyl ester;

{3-[(2-Amino-benzooxazole-6-sulfonyl)-isobutyl-amino]-1-benzyl-2-hydroxy-propyl}-carbamic acid thiazol-5-ylmethyl ester;

{3-[(3H-Benzoimidazole-5-sulfonyl)-isobutyl-amino]-1-benzyl-2-hydroxy-propyl}-carbamic acid thiazol-5-ylmethyl ester;

(3-{[2-(Acetyl-methyl-amino)-benzothiazole-6-sulfonyl]-isobutyl-amino}-1-benzyl-2-hydroxy-propyl)-carbamic acid thiazol-5-ylmethyl ester;

{3-[(2-Amino-benzooxazole-6-sulfonyl)-pyridin-2-ylmethyl-amino]-1-benzyl-2-hydroxy-propyl}-carbamic acid thiazol-5-ylmethyl ester trifluoroacetate salt;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[(5-oxo-pyrrolidine-2-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-yl methyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[(5-oxo-pyrrolidine-2-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-yl methyl ester;

[1-Benzyl-3-({2-[(furan-3-carbonyl)-amino]-benzooxazole-6-sulfonyl}-isobutyl-amino)-2-hydroxy-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[(1-methyl-piperidine-4-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[(pyridine-2-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

{3-[(2-Amino-benzooxazole-6-sulfonyl)-isobutyl-amino]-1-benzyl-2-hydroxy-propyl}-carbamic acid 2-chloro-thiazol-5-ylmethyl ester;

(1-Benzyl-3-{[2-(2-dimethylamino-acetylamino)-benzooxazole-6-sulfonyl]-isobutyl-amino}-2-hydroxy-propyl)-carbamic acid thiazol-5-ylmethyl ester;

{1-Benzyl-2-hydroxy-3-[isobutyl-(2-piperazin-1-yl-benzooxazole-6-sulfonyl)-amino]-propyl}-carbamic acid thiazol-5-ylmethyl ester;

{1-Benzyl-2-hydroxy-3-[isobutyl-(2-piperidin-1-yl-benzooxazole-6-sulfonyl)-amino]-propyl}-carbamic acid thiazol-5-ylmethyl ester;

{1-Benzyl-2-hydroxy-3-[isobutyl-(2-{2-[methyl-(2-pyrrolidin-1-yl-ethyl)-amino]-acetylamino}-benzooxazole-6-sulfonyl)-amino]-propyl}-carbamic acid thiazol-5-ylmethyl ester;

{1-Benzyl-3-[(2-dimethylamino-benzooxazole-6-sulfonyl)-isobutyl-amino]-2-hydroxy-propyl}-carbamic acid thiazol-5-ylmethyl ester;

{3-[(2-Amino-benzooxazole-6-sulfonyl)-isobutyl-amino]-1-benzyl-2-hydroxy-propyl}-carbamic acid oxazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[(pyridine-4-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[methyl-(pyridine-2-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[methyl-(1-methyl-piperidine-3-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[methyl-(1-methyl-piperidine-4-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-3-({2-[(2-chloro-pyridine-4-carbonyl)-methyl-amino]-benzooxazole-6-sulfonyl}-isobutyl-amino)-2-hydroxy-propyl]-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{2-[methyl-(1-methyl-pyrrolidine-2-carbonyl)-amino]-benzooxazole-6-sulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester trifluoroacetate salt;

{1-Benzyl-2-hydroxy-3-[isobutyl-(3-phenethyl-3H-benzoimidazole-5-sulfonyl)-amino]-propyl}-carbamic acid thiazol-5-ylmethyl ester;

{1-Benzyl-2-hydroxy-3-[isobutyl-(3-isobutyl-3H-benzoimidazole-5-sulfonyl)-amino]-propyl}-carbamic acid thiazol-5-ylmethyl ester;

[1-Benzyl-2-hydroxy-3-(isobutyl-{4-[2-(pyridin-4-ylamino)-thiazol-4-yl]-benzenesulfonyl}-amino)-propyl]-carbamic acid thiazol-5-ylmethyl ester;

(1-Benzyl-2-hydroxy-3-{isobutyl-[4-(2-methyl-oxazol-4-yl)-benzenesulfonyl]-amino}-propyl)-carbamic acid thiazol-5-ylmethyl ester or

{3-[(2-Amino-benzooxazole-6-sulfonyl)-isobutyl-amino]-1-benzyl-2-hydroxy-propyl}-carbamic acid thiazol-5-ylmethyl ester;

or a N-oxide, salt, stereoisomeric form thereof.

13. The use as claimed in any one of claims 1 to 12 wherein the mammal is co-infected with HIV and HCV.

14. The use of a sulfonamide as defined in any one of claim 1 to 12 in a pharmaceutical composition aimed to treat or combat HCV infection.

15. A combination of a sulfonamide as defined in any one of claim 1 to 12 with another anti-HCV agent.

16. A combination as claimed in claim 15 further comprising an anti-HIV agent.